

### **REMARKS/DISCUSSION OF ISSUES**

By this Amendment, Applicants cancel claims 6 and 8 without disclaimer of the underlying subject matter, or prejudice against subsequent prosecution. Applicants also amend claims 1-5, 7 and 9-16. Accordingly, claims 1-5, 7 and 9-16 are pending in the application.

Applicants thank the Examiner for acknowledging the claim for priority and receipt of certified copies of all the priority documents, and for indicating that the drawings are acceptable.

Reexamination and reconsideration are respectfully requested in view of the following Remarks.

### **OBJECTION TO SPECIFICATION**

Applicants thank the Examiner for providing information about recommended section headings. However, Applicants respectfully decline to add the headings. Section headings are not statutorily required for filing a non-provisional patent application under 35 USC § 111(a), but per 37 CFR § 1.51(d) are only guidelines that are suggested for applicant's use. (See Miscellaneous Changes in Patent Practice, Response to comments 17 and 18 (Official Gazette, August 13, 1996) [Docket No: 950620162-6014-02] RIN 0651-AA75 ("*Section 1.77 is permissive rather than mandatory. ... [T]he Office will not require any application to comply with the format set forth in 1.77*")).

Accordingly, Applicants respectfully request that the objections to the specification be withdrawn.

### **OBJECTIONS TO CLAIMS**

By this Amendment, Applicants delete all reference numerals from the claims.

Accordingly, Applicants respectfully request that the objections to the claims be withdrawn.

**35 U.S.C. §§ 102 and 103**

The Office Action rejects: claims 1, 3, 7, 9-10 and 14-15 under 35 U.S.C. § 102 over Lieber et al. U.S. Patent Application Publication 2002/0117659 ("Lieber"); claims 1, 3-6, 8, 12 and 13 under 35 U.S.C. § 103 over Wolf U.S. Patent Application Publication 2003/0087311 ("Wolf") in view of Potyrailo et al. U.S. Patent 6,538,725 ("Potyrailo"); claim 2 under 35 U.S.C. § 103 over Wolf in view of Potyrailo and further in view of Liang U.S. Patent Application Publication 2003/0096375 ("Liang"); and claim 11 under 35 U.S.C. § 103 over Wolf in view of Potyrailo and further in view of Empedocles et al. U.S. Patent Application Publication 2004/0005723 ("Empedocles").

Applicants respectfully submit that all of the pending claims 1-5, 7 and 9-16 are patentable over the cited art for at least the following reasons.

**Claim 1**

Among other things, in the device of claim 1 the surface of at least one nanowire is provided with at least one binding site able to selectively bind a molecule that, when bound to the binding site, quenches the luminescence of the nanowire, and a photodetector is provided for detecting the luminescence of the nanowire and for outputting a signal in response to the luminescence of the nanowire that indicates whether the molecule is bound to the binding site and is quenching the luminescence of the nanowire.

Applicants respectfully submit that no combination of the cited references discloses or suggests a device including this combination of features and which operates based on a molecule quenching the luminescence of a nanowire.

Accordingly, for at least these reasons, Applicants respectfully submit that claim 1 is patentable over any combination of the cited art.

**Claims 2-5, 7 and 9-16**

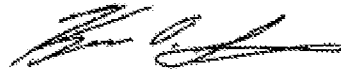
Claims 2-5, 7 and 9-16 depend from claim 1 and are all deemed patentable for at least the reasons set forth above with respect to claim 1.

**CONCLUSION**

In view of the foregoing explanations, Applicants respectfully request that the Examiner reconsider and reexamine the present application, allow claims 1-5, 7 and 9-16 and pass the application to issue. In the event that there are any outstanding matters remaining in the present application, the Examiner is invited to contact Kenneth D. Springer (Reg. No. 39,843) at (571) 283.0720 to discuss these matters.

Respectfully submitted,

VOLENTINE & WHITT



By: \_\_\_\_\_

Kenneth D. Springer  
Registration No. 39,843

VOLENTINE & WHITT  
One Freedom Square  
11951 Freedom Drive, Suite 1260  
Reston, Virginia 20190  
Telephone No.: (571) 283.0724  
Facsimile No.: (571) 283.0740